# Summer Term-1 2023

**Mike Thompson, Assessment and Curriculum Coordinator / LPDS Manager**

Welcome to our newsletter for the Summer Term. It is amazing how quickly the year goes by. We just need the weather to reflect the term a little more now! This term I would like to welcome Secondary Consultants, Andrew Pearson, Katy McWean and Kate Griffiths to the Team. In addition, Diane Sheron has joined us as Behaviour Consultant for Primary Schools. All can be contacted via LPDS and there are already a range of courses available on the LPDS website that they are leading on.

As you know, at Lancashire Professional Development Service, our aim is to support teachers and leaders in improving teaching and learning in their schools. We are committed to providing high-quality training, resources, and support to help teachers develop their skills and knowledge, and to make a positive impact on the lives of their children. In this edition, we have a range of articles, updates, and resources to share with you, including details of our latest courses, an introduction from Diane, Andrew and Katy who have joined the team, and tips and advice for improving teaching and learning in your setting. We hope you find this newsletter informative and useful, and as always, we welcome your feedback and suggestions for future content.

My best wishes for a successful summer term in School

# A Summary of Ofsted's Science Subject Report: Finding the Optimum

**Rachael Webb, Primary Teaching and Learning Consultant**

In February 2023, Ofsted published their latest report into science teaching, Finding the optimum: the science subject report - GOV.UK (www.gov.uk). The report evaluates the common strengths and weaknesses of science education and considers the challenges that science faces. The evidence was gathered as part of routine inspections. The report uses the Ofsted Science Research Review, Feb 2019, as a lens through which to evaluate science in both primary and secondary schools. These are some key findings for primary science.

**Key findings from the report**

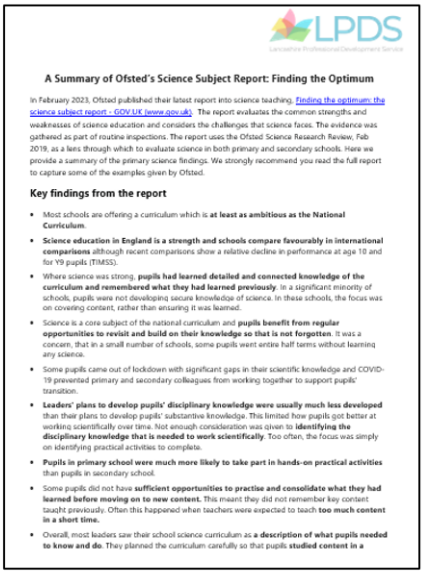
- Most schools are offering a curriculum which is **at least as ambitious as the National Curriculum**.
- **Science education in England is a strength and schools compare favourably in international comparisons** although recent comparisons show a relative decline in performance at age 10 [and for Y9 pupils] (TIMSS).
- Where science was strong, **pupils had learned detailed and connected knowledge of the curriculum and remembered what they had learned previously**. In a significant minority of schools, pupils were not developing secure knowledge. In these schools, the focus was on covering content, rather than ensuring it was learned.
- Science is a core subject and **pupils benefit from regular opportunities to revisit and build on their knowledge so that is not forgotten**. It was a concern, that in a small number of schools, some pupils went entire half terms without learning any science.
- **Leaders' plans to develop pupils' disciplinary knowledge were usually much less developed** than their plans to develop pupils' substantive knowledge.
- Some pupils did not have **sufficient opportunities to practise and consolidate what they had learned before moving on to new content.** This meant they did not remember key content taught previously. Often this happened when teachers were expected to teach **too much content in a short time.**
- In some primary schools, **the knowledge of the natural world that children are expected to learn in Reception was not clear enough** with just general topic

areas or activities planned. This limited how effectively children were prepared for learning in year 1

- **Subject leaders played a crucial role in developing** school science curriculums and supporting teachers to teach them. However**, not all SLs had access to dedicated leadership time and subject leadership training.**
- **Generally, assessment did not check whether pupils had remembered what they had learned in previous years.**
- In some schools, there was not enough focus on **checking whether pupils had learned the disciplinary knowledge that is needed to work scientifically.** These schools only focused on checking that pupils had learned substantive knowledge.

A 7-page summary of the key findings and recommendations has been written by the LPDS Teaching & Learning Consultant for Primary Science and can be found here;

## LPDS Summary of Key Findings and Recommendations



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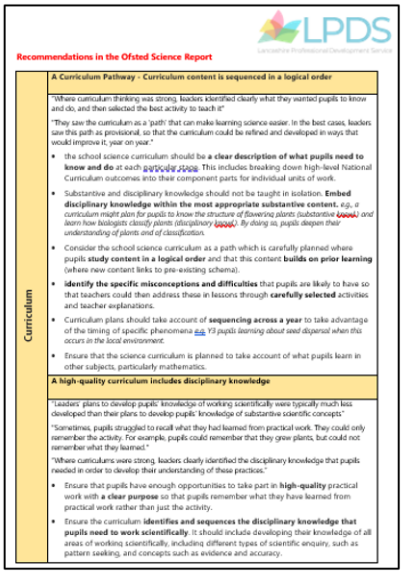
Key findings from the report

- Most schools are offering a curriculum which is **at least as ambitious as the National Curriculum.**
- **Science education in England is a strength and schools compare favourably in international comparisons** although recent comparisons show a relative decline in performance at age 10 and for Y9 pupils (TIMSS).
- Where science was strong, **pupils had learned detailed and connected knowledge of the curriculum and remembered what they had learned previously**. In a significant minority of schools, pupils were not developing secure knowledge of science. In these schools, the focus was on covering content, rather than ensuring it was learned.
- Science is a core subject of the national curriculum and **pupils benefit from regular opportunities to revisit and build on their knowledge so that is not forgotten**. It was a concern, that in a small number of schools, some pupils went entire half terms without learning any science.
- Some pupils came out of lockdown with significant gaps in their scientific knowledge and COVID-19 prevented primary and secondary colleagues from working together to support pupils' transition.
- **Leaders' plans to develop pupils' disciplinary knowledge were usually much less developed** than their plans to develop pupils' substantive knowledge. This limited how pupils got better at working scientifically over time. Not enough consideration was given to **identifying the disciplinary knowledge that is needed to work scientifically.** Too often, the focus was simply on identifying practical activities to complete.
- **Pupils in primary school were much more likely to take part in hands-on practical activities** than pupils in secondary school.
- Some pupils did not have **sufficient opportunities to practise and consolidate what they had learned before moving on to new content.** This meant they did not remember key content taught previously. Often this happened when teachers were expected to teach **too much content in a short time.**
- Overall, most leaders saw their school science curriculum as **a description of what pupils needed to know and do**. They planned the curriculum carefully so that pupils **studied content in a**



Recommendations in the Ofsted Science Report

Curriculum

A Curriculum Pathway - Curriculum content is sequenced in a logical order

"Where curriculum thinking was strong, leaders identified clearly what they wanted pupils to know and do, and then selected the best activity to teach it"

"They saw the curriculum as a 'path' that can make learning science easier. In the best cases, leaders saw this path as provisional, so that the curriculum could be refined and developed in ways that would improve it, year on year."

- the school science curriculum should be **a clear description of what pupils need to know and do** at each particular point. This includes breaking down high-level National Curriculum outcomes into their component parts for individual units of work.
- Substantive and disciplinary knowledge should not be taught in isolation. **Embed disciplinary knowledge within the most appropriate substantive content.** *e.g. a curriculum might plan for pupils to know the structure of flowering plants (substantive knowledge) and learn how biologists classify plants (disciplinary knowledge). By doing so, pupils deepen their understanding of plants and of classification.*
- Consider the school science curriculum as a path which is carefully planned where pupils **study content in a logical order** and that this content **builds on prior learning** (where new content links to pre-existing schema).
- **identify the specific misconceptions and difficulties** that pupils are likely to have so that teachers could then address these in lessons through **carefully selected** activities and teacher explanations.
- Curriculum plans should take account of **sequencing across a year** to take advantage of the timing of specific phenomena *e.g. Y3 pupils learning about seed dispersal when this occurs in the local environment.*
- Ensure that the science curriculum is planned to take account of what pupils learn in other subjects, particularly mathematics.

A high-quality curriculum includes disciplinary knowledge

"Leaders' plans to develop pupils' knowledge of working scientifically were typically much less developed than their plans to develop pupils' knowledge of substantive scientific concepts"

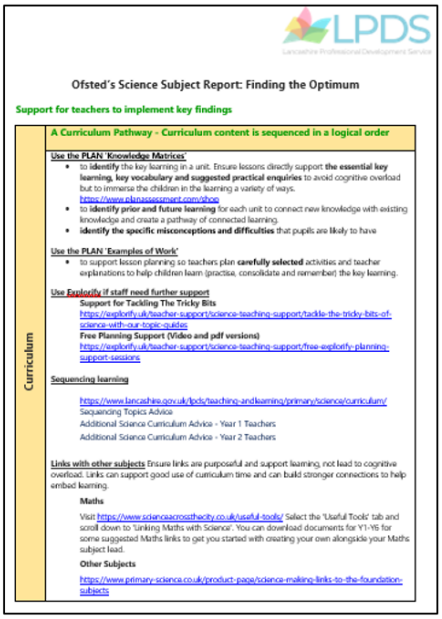
"Sometimes, pupils struggled to recall what they had learned from practical work. They could only remember the activity. For example, pupils could remember that they grew plants, but could not remember what they learned."

"Where curriculums were strong, leaders clearly identified the disciplinary knowledge that pupils needed in order to develop their understanding of these practices."

- Ensure that pupils have enough opportunities to take part in **high-quality** practical work with **a clear purpose** so that pupils remember what they have learned from practical work rather than just the activity.
- Ensure the curriculum **identifies and sequences the disciplinary knowledge that pupils need to work scientifically**. It should include developing their knowledge of all areas of working scientifically, including different types of scientific enquiry, such as pattern seeking, and concepts such as evidence and accuracy.

Schools who have subscribed to the LPDS Teaching and Learning webpage (and those attending the Spring and Summer Science Network meetings) can also access a support document sharing links to key resources and ideas to address each of the Ofsted recommendations.

## LPDS Ideas and Resources for Support in your Setting



Ofsted's Science Subject Report: Finding the Optimum

**Support for teachers to implement key findings**

**A Curriculum Pathway - Curriculum content is sequenced in a logical order**

Curriculum

**Use the PLAN 'Knowledge Matrices'**

- to **identify** the key learning in a unit. Ensure lessons directly support **the essential key learning, key vocabulary and suggested practical enquiries** to avoid cognitive overload but to immerse the children in the learning a variety of ways.
  https://www.planassessment.com/pbce
- to **identify prior and future learning** for each unit to connect new knowledge with existing knowledge and create a pathway of connected learning.
- **identify the specific misconceptions and difficulties** that pupils are likely to have

**Use the PLAN 'Examples of Work'**

- to support lesson planning so teachers plan **carefully selected** activities and teacher explanations to help children learn (practise, consolidate and remember) the key learning.

**Use Explorify if staff need further support**

**Support for Tackling The Tricky Bits**
https://explorify.uk/teacher-support/science-teaching-support/tackle-the-tricky-bits-of-science-with-our-topic-guides

**Free Planning Support (Video and pdf versions)**
https://explorify.uk/teacher-support/science-teaching-support/free-explorify-planning-support-sessions

**Sequencing learning**

https://www.lancashire.gov.uk/lpds/teaching-and-learning/primary/science/curriculum/
Sequencing Topics Advice
Additional Science Curriculum Advice - Year 1 Teachers
Additional Science Curriculum Advice - Year 2 Teachers

**Links with other subjects** Ensure links are purposeful and support learning, not lead to cognitive overload. Links can support good use of curriculum time and can build stronger connections to help embed learning.

**Maths**

Visit https://www.scienceacrossthecity.co.uk/useful-tools/ Select the 'Useful Tools' tab and scroll down to 'Linking Maths with Science'. You can download documents for Y1-Y6 for some suggested Maths links to get you started with creating your own alongside your Maths subject lead.

**Other Subjects**

https://www.primary-science.co.uk/product-page/science-making-links-to-the-foundation-subjects

For support or advice from the science team please contact rachael.webb@lancashire.gov.uk

## Reducing Anxiety in our Schools: Understanding the emotions and powerful practical strategies for all class teachers, SENDCOs and school leaders

Join us for a conference on Reducing Anxiety in Our Schools, presented by world-renowned experts Shirley Clarke and Dr. Angela Evans. This event provides practical strategies for primary class teachers, support staff, and school leaders to address the escalating mental health issues among children. Gain an in-depth understanding of the psychology behind the issues, with current evidence and guidance, and learn practical strategies for containment in class and for the whole school. Discover how to raise children's self-efficacy, ease cognitive load, and provide clear structure during lessons. Don't miss the chance to see a case study of an exemplary head teacher's strategies for creating a whole school culture of compassion and containment while still having high expectations for learning. Register now to access useful handouts, video clips, and opportunities for discussion throughout the event.

Spaces are filling incredibly quickly, don't miss out on your opportunity to attend. Register now!

**Shirley Clarke M.Ed, Hon.DEd**

*World expert in formative assessment theory and practice*

**Dr. Angela Evans**

Adolescent Psychoanalytic Psychotherapist; 20 yrs in CAMHS; previously teacher, SENDCO and residential care home worker

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# New Additions to the Team

**Katy McWean, Secondary English and Literacy Consultant**

It is with great pleasure and enthusiasm that I introduce myself to you as a new addition to the LPDS family. My name is Katy McWean and I have worked as Lancashire Secondary English and Literacy Consultant for the past four and a half years following over twenty years English teaching and various leadership roles. Having moved over to LPDS, I am thrilled to be working now with LPDS colleagues carrying on supporting secondary English departments with bespoke consultancy, bespoke packages of support and a suite of secondary English and literacy training courses.

**Andy Pearson, Secondary Science Teaching and Learning Consultant**

Hello all and please allow me to introduce myself. My name is Andy Pearson and I have worked as Lancashire Secondary Science Teaching and Learning Consultant since 2018 with an additional 23 years at the chalkface working in Lancashire schools as a science teacher, advanced skills teacher, Head of Science and Lead Practitioner for Teaching and Learning. I'm really looking forward to continuing our support of schools through delivery of specialist CPD opportunities in science and more broadly generic learning and teaching , through consultancy with schools and their staff and through the termly support meetings for subject leaders and teaching and learning leads.

# Behaviour

**Diane Sheron, Primary Behaviour Consultant**

I am just settling into my new role as primary behaviour consultant for Lancashire and am very much looking forward to working with colleagues within our schools.

One of the important parts of enabling pupils to access the inspirational learning you have created, is effective positive behaviour management, of which de-escalation is an important part.

De-escalation is not about simply stopping a behaviour. It is more about spotting the often subtle signs of when a child is feeling anxious or distressed and using appropriate intervention strategies to calm and reconnect the feelings which are driving the behaviour, ultimately to prevent them spiralling into a potential crisis.

None of us want to see a child in our care escalate towards crisis, so it is important for all staff to have a toolkit of de-escalation strategies to call upon when required. These tools can help the child to regulate the emotions which are driving the behaviours, ensuring they feel supported, therefore reducing risk.

There are many de-escalation techniques depending on the character, background and needs of each individual child. One size doesn't fit all. The most successful techniques are those which are personalised to the child which is why forming relationships between adults and children is crucial.

As an adult, I have developed the skills to recognise when I am upset or frustrated. I can recognise the triggers and over time have built up a bank of strategies such as mindfulness, taking a walk or just taking myself off with a cup of tea. Sometimes colleagues or family help me to re-focus and this is exactly what our children need. Some more than others. A bank of strategies such as regulation spaces, an empathic emotion coaching approach, choices, mirroring, tone of voice and body language, all with an adult guiding alongside are some useful tools. These strategies will be reflected with individual support plans to ensure a consistent approach, preventing crisis situations.

I am delivering some CPD over the Summer term, one of which is a focus on de-escalation, so will look forward to seeing you there.


## Spring 2023 History Subject Leaders' Network Meeting (Recording/ Publication): The leadership styles and achievements of Ancient Greek city states.

Our Spring 2023 History Subject Leader Network examines the latest OFSTED webinar.  We will consider implications for concept mapping, long-term planning, medium-term planning and sequences of learning in history (all exemplified through a variety of primary examples).

Key messages from the webinar will then be further exemplified through a detailed historical teaching sequence considering the leadership styles and achievements of Ancient Greek city states.

A comprehensive download of resources will be sent to each delegate along with the on-demand video link.

Order your copy

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Teaching and Learning Website

## LPDS Teaching and Learning Website Update

Visitors to the LPDS Teaching and Learning website can now checkout as a guest, when booking a course place. Just find your perfect CPD session and apply directly from the page. It is still advantageous to login, as your school details are stored in the system and will not need to be entered, however, if you have mislaid your password, you now have the flexibility to choose.

Explore the LPDS Teaching and Learning website.

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**FREE BRIEFING**

Red Rose Letters and Sounds: Systematic Synthetic Phonics Programme.

If the subscription to your current phonics programme is coming to an end and you are looking for a different approach, join our free briefing to find out more.

Red Rose Letters and Sounds is tried and tested in well over 200 schools, with highly successful outcomes, and ensures children become enthusiastic readers and writers in Reception and Key Stage One.

Find out more at our **FREE** online briefing this May:

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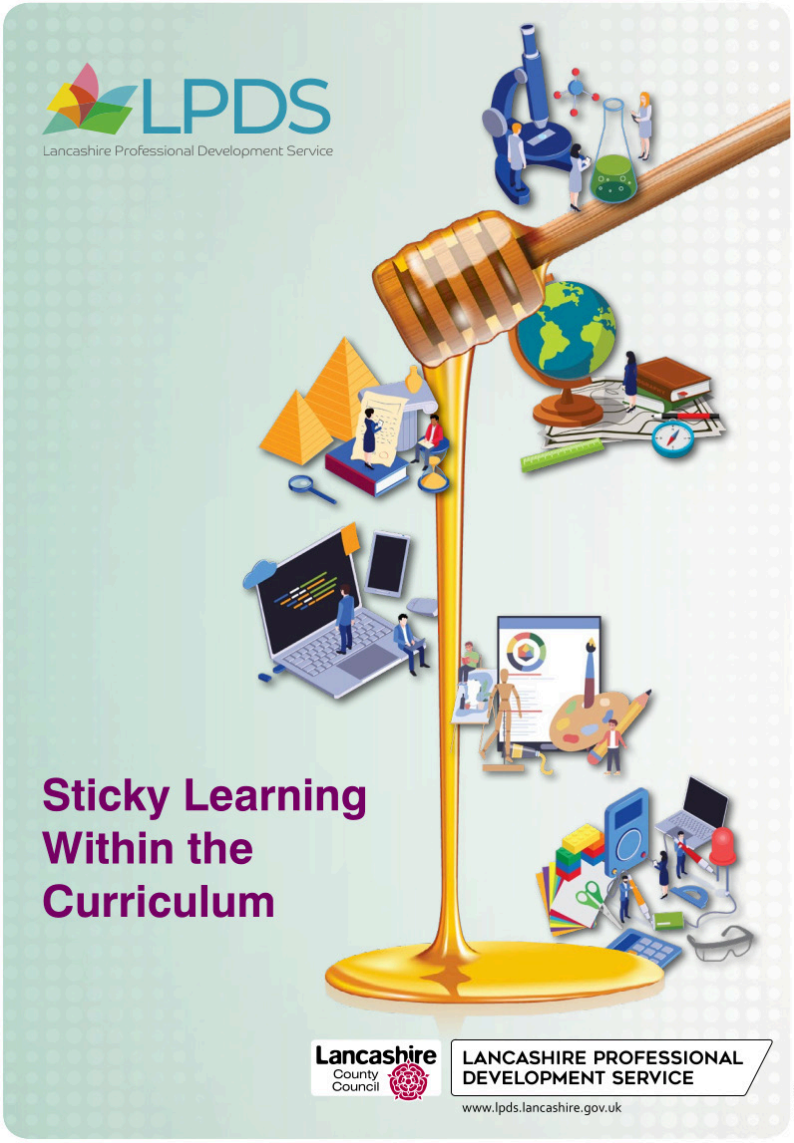
- 10th May 2023 - 3.45pm to 4.45pm, Hosted by one of our Consultants for Primary English and Literacy, along with our Early Literacy Consultant.

Register your place.

## New 'Sticky Learning' Publication Available from LPDS




**How can we ensure that what children learn sticks with them for a long time?**

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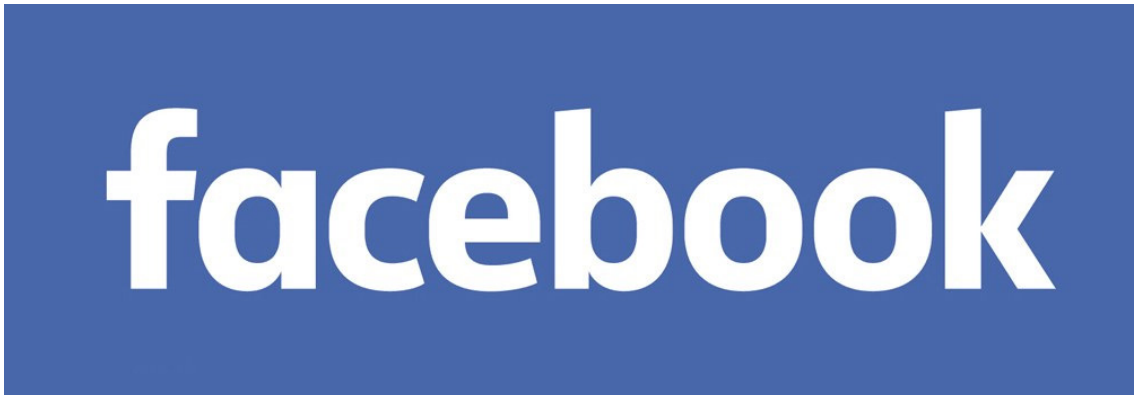
This publication will support teachers and subject leaders in identifying and using strategies to support children in retaining their learning over time. How the human memory works, the importance of curriculum structure, strategies for teaching and learning, questioning, and approaches to speaking and listening are explored within the context of sticky learning.

There are separate chapters for **science, geography, history, computing, art and DT** which identify subject specific examples of pedagogical approaches aimed at supporting children in committing new learning to their long term memory.

An invaluable guide for subject leaders and teachers to maximise the learning potential within their classroom.

Order your copy.

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